

County Borough



of Wolverhampton.

REPORT

UPON THE

HEALTH OF WOLVERHAMPTON


FOR THE YEAR 1919

BY

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MEDICAL OFFICER'S REPORT,

1919.

Prevalence and Prevention of Infectious Disease.

Table 3 gives the weekly number of cases of certain diseases certified by Medical Men under the Infectious Diseases Notification Act, and of Phthisis under the Tuberculosis Regulations. Any certificate detected as erroneous before the close of the week is not entered.

Table 1 gives the total number of cases about which enquiries were made and which were recorded; no erroneous cases are entered in this Table.

Small Pox.—We had a case of Small Pox in June, 1905, about seven years after we had another isolated case, in November, 1912; nearly seven years after that we had another case reported on August 18th, this year. It was a boy aged 12 years., vaccinated in infancy, four marks. He was taken ill on August 14th: on the 18th he was sent into the General Hospital as a case of Meningitis, was reported from there as Small Pox, and died at 7 a.m. on the 19th. There was some element of doubt about the case.

Measles.—Our mean annual deaths from Measles since 1884 are as follows:—

	1884-90	1891-1900	1901-10	1911-15	1916	1917	1918	1919
Deaths	50·3	35·4	40·0	59·4	51	16	14	7

We have been fairly free from Measles this year. There was a slight scattered prevalence during the first quarter, mostly in the East; in the second quarter there was an increase over the whole Borough: during the last half-year there were only a few cases. Besides the cases reported from schools, there were 495 cases notified during the year; 354 of these were notified by doctors, 7 of these were notified as German Measles; the remaining 141 cases were notified by relatives.

Scarlet Fever.—We began recording our cases in 1884, but as we have only had notifications since 1890 (inclusive), the returns before that year are less complete than those since. The death records in my possession go back to 1870; the following are the average deaths since that year, and cases since 1884:—

	1878-80	1881-90	1891-1900	1901-10	1911-15	1916	1917	1918	1919
Deaths	64·5	25·5	21·1	13·0	4·2	3	5	5	4
Cases	—	212·7	465·1	425·6	278·6	136	275	168	146

The remarkable low prevalence of Scarlet Fever at the close of 1918 continued through the first six months of 1919. In the second quarter there was a slight local outbreak in the East, and this materially extended in the third quarter, the West having only a very few cases. During the fourth quarter there was an increased number of cases in each Sub-District, but no outbreak.

The following Table gives quarterly particulars as to the cases in the two Sub-districts. The deaths are those of the cases reported in each quarter, and sometimes occur later; except in Table 2, they do not necessarily correspond to the deaths in the Mortality Tables, which are those registered in each quarter:—

Quarters.				1st.	2nd.	3rd.	4th.	Year.
EAST	...	Total	Cases	6	11	34	39	90
			Deaths	1	...	...	...	1
	...	Hospital	Cases	3	11	32	36	82
			Deaths	...	...	...	...	...
	...	At Home	Cases	3	...	2	3	8
			Deaths	1	...	...	...	1
WEST	...	Total	Cases	10	3	9	34	56
			Deaths	...	...	...	2	2
	...	Hospital	Cases	6	3	9	31	49
			Deaths	...	...	...	1	1
	...	At Home	Cases	4	...	...	3	7
			Deaths	...	...	...	1	1

The East Mortality per case is 1.1 per cent; the West 3.8 per cent.

The case mortality in the Hospital is 0.8 per cent. amongst the home cases 13.3 per cent., but the numbers are too few to make this of much significance.

The following is a summary of the apparent effects of removal and home care on the spread of the infection in the households attacked during the year. No account is taken of houses where there is no susceptible child after the first case attacked; children who have already had Scarlet Fever being counted as insusceptible, 'children' includes all under 18 years of age. Hospital removal was effected in 90 houses; after the first removals there remained in these houses 225 children. In 83 of these houses there was no recurrence after removal, 208 children escaping. In seven houses there was recurrence, seven children being attacked, one of these was taken ill within three days of the previous removal, and probably infected before it. In these seven houses, 10 children still escaped after final Hospital removal.

Cases were kept at home in 13 houses; in six of these the patient was the only child; in two the patient died in two days; in only five houses was there continued isolation. In these five houses there were six children after the first case, in two instances a second occurred, but in each instance only two days after the primary case, and, therefore, probably infected before isolation was commenced.

The following tabular statement shows the results at a glance —

			Hospital Removal.	Home Isolation.
Total Houses	—	—	90	5
Cases recurred in	—	—	7	2
Number of children after primary cases			225	6
Number subsequently attacked	—		7 or 3·1 %	2 or 33·3%
Number possibly due to failure	—		6 or 2·7 %	0 or 0·0%
Number of children escaping	—		218 or 96·9 %	4 or 66·7%

The following is the total for the twenty-six years, 1894—1919—

			Hospital Removal.	Home Isolation.
Total Houses	—	—	4,643	526
Cases recurred in	—	—	441	158
Number of children after primary cases	—		11,869	977
Number of these attacked	—		547 or 4·6%	212 or 21·7%
Number possibly due to failure	—		279 or 2·3%	143 or 14·6%
Number of children escaping	—		11,322 or 95·4%	761 or 78·3%

A correction which must be made against the Hospital Statistics is that due to what are called "return cases," that is, cases presumed to be infected by patients discharged from Hospital; this year there were possibly two such cases. During the past 26 years we have had a total of 358 return cases: these with the 279 primary failures give 637 re.infections in 11,869 children after Hospital care, or 5.4%, compared with 14.6% for home isolation.

Diphtheria.—The annual cases of, and deaths registered as due to Diphtheria in the Sub-Districts since 1890 have been:—

		1890	1891	1892	1893	1894	1895	1896	1897	1898
EAST	{ Cases ...	11	8	3	14	36	88	114	121	76
	{ Deaths ...	2	1	2	2	20	29	21	21	18
WEST	{ Cases ...	12	25	13	21	46	220	246	190	126
	{ Deaths ...	2	4	2	3	13	55	34	37	25
BOROUGH	{ Cases ...	23	33	16	35	82	308	360	311	202
	{ Deaths ...	4	5	4	5	33	84	55	58	43
		1899	1900	1901	1902	1903	1904	1905	1906	1907
EAST	{ Cases ...	37	35	30	36	9	23	20	22	43
	{ Deaths ...	12	4	7	12	2	7	3	7	8
WEST	{ Cases ...	68	60	76	55	37	55	66	74	117
	{ Deaths ...	9	6	6	6	8	11	15	16	18
BOROUGH	{ Cases ...	105	95	106	91	46	78	86	96	160
	{ Deaths ...	21	10	13	18	10	18	18	23	26
		1908	1909	1910	1911	1912	1913	1914	1915	1916
EAST	{ Cases ...	44	17	5	17	26	29	34	51	35
	{ Deaths ...	12	3	...	2	8	3	5	4	4
WEST	{ Cases ...	116	39	26	31	24	42	79	87	87
	{ Deaths ...	21	8	4	3	4	4	13	11	13
BOROUGH	{ Cases ...	160	56	31	48	50	71	113	138	122
	{ Deaths ...	33	11	4	5	12	7	18	15	17
		1917	1918	1919						
EAST	{ Cases ...	18	15	20						
	{ Deaths ...	3	2	2						
WEST	{ Cases ...	39	41	38						
	{ Deaths ...	4	3	...						
BOROUGH	{ Cases ...	57	56	58						
	{ Deaths ...	7	5	2						

The prevalence of Diphtheria this year has been low, the deaths very low. Of the 20 cases in the East, 15 were removed to the General Hospital; two of these were fatal. Of the 38 West cases, 26 were removed to the General Hospital. There were no deaths.

During the year there were 146 Bacteriological Reports on Diphtheria from the Laboratory at the General Hospital; 98 of these were

on General Hospital cases ; 51 primary examinations, 14 positive, and 37 negative, 47 second and subsequent examinations, 5 positive, and 42 negative. The remaining 48 examinations were made for thirteen doctors ; 41 were primary, 10 positive, and 31 negative ; 7 were subsequent examinations, 3 positive and 4 negative.

Enteric Fever.—The cases recorded and deaths registered since 1890 have been ;—

		1890	1891-1900	1901-1910	1910	1911	1912	1913	1914	1915
EAST	{ Cases	22	65·1	24·1	2	3	4	5	2	1
	{ Deaths	6	12·9	5·2	...	1	1	...	3	...
WEST	{ Cases	22	61·3	24·5	2	6	1	5	6	2
	{ Deaths	3	12·1	4·7	1	1	...	4	...	1
BORO'	{ Cases	44	126·4	48·6	4	9	5	10	8	3
	{ Deaths	9	25·0	9·9	1	2	1	4	3	1
		1890	1891-1900	1901-1910	1910	1911	1912	1913	1914	1915
			1916	1917-18-19						
EAST	{ Cases	...	...	...			
	{ Deaths	...	...	...			
WEST	{ Cases	1	...	...				
	{ Deaths	...	...	...			
BORO'	{ Cases	1	...	...				
	{ Deaths	...	...	...			

Although 1910 is included in the previous decade, its figures are repeated because of the sudden drop that year.

Puerperal Fever.—Only 5 cases were reported (one of those in Table No. 3 was an error) ; all were between November 2nd and December 14th. All occurred in Midwives' practice doctors being sent for. Four of the cases were removed to the General Hospital, and one to the Union Infirmary. One Hospital case was fatal.

Cerebro-Spinal Meningitis.—Seven cases were reported, all were treated at the General Hospital. Meningococci were found in all but one case, and this case I believe was ordinary Septicæmia : the case recovered. Of the other six two completely recovered, four died ; in one case the death was after five months, and was certified "General Tuberculosis."

Polio-Myelitis.—One case was reported, it was treated at the General Hospital, and recovered with partial paralysis of one arm.

The following were also reported and investigated :—Primary Pneumonia, 47 cases: Influenzal Pneumonia, 35 cases, Malaria, 25 cases: Dysentery, 4 cases: Trench Fever, one case.

Tuberculosis.—During the year we have had 303 primary notifications on Form A; 294 of these were pulmonary. We had 24 notifications from the School Medical Officer on Form B; 18 of these were pulmonary. Of the 294 pulmonary notifications on Form A, 184 were from the Tuberculosis Officers, and only 85 from other doctors. All cases are enquired into, and a sheet of the particulars forwarded to the Tuberculosis Officer; and nearly all cases, not already under his care, are referred to him. During the year there were 83 reports on suspected Phthisis from the General Hospital Laboratory; 10 of these were on Hospital cases; 3 positive and 7 negative. The remaining 73 were for 19 doctors; 15 positive, 58 negative.

Diarrhœa.—The mean annual deaths registered as due to Diarrhœa since 1875 have been :

1875-80	1881-90	1891-1900	1901-10	1911	1912	1913	1914
85.3	84.5	126.0	81.8	99	30	118	91
		1915	1916	1917	1918	1919	
		49	62	32	28	46	

The annual figures previous to 1910 will be found in the 1914 report.

There has been no real epidemic this year.

The following table gives the annual Diarrhœa deaths since 1911, and the weekly means of the 4ft. deep earth temperature, the figures in the column after the second give the number of weeks in each year during which this temperature exceeded the degree at the head of the column. The figures for the previous decades are given in the 1910, 1903 and previous reports.

	Deaths	52 °	53 °	54 °	55 °	56 °	57 °	58 °
1911	... 156	21	19	17	13	11	10	7
1912	... 30	18	15	13	8	5	...	...
1913	... 118	22	19	17	14	9	1	...
1914	... 91	22	20	17	15	12	10	2
1915	... 49	20	19	14	10	5	...	...
1916	... 62	17	15	13	8	6	3	...
1917	... 32	19	17	13	11	5	...	...
1918	... 28	20	17	12	12	6	2	1
1919	... 46	19	17	16	7	6	3	...

The following gives similar figures for the 1ft. deep earth temperature; and also the annual rainfall:—

		Deaths	60 °	61 °	62 °	63 °	64 °	65 °	66 °	Inches
1911	...	156	13	12	11	8	7	6	2	21.86
1912	...	30	4	3	2	1	1	...	...	34.42
1913	...	118	7	2	...	...	...	...	...	27.88
1914	...	91	13	8	6	2	...	...	...	28.98
1915	...	49	3	1	...	...	...	...	...	30.11
1916	...	62	5	5	3	2	2	1	...	26.48
1917	...	32	9	2	1	1	...	...	...	28.93
1918	...	28	9	4	1	...	...	...	...	29.39
1919	...	46	4	2	2	2	1	...	...	28.89

The Diarrhœa fatality is more or less in direct ratio to the temperature and inverse ratio to the rainfall; but beyond these the disease is a marked index of the general sanitary condition of a district.

Influenza.—At the beginning of February we had a formidable epidemic of influenza, not quite so severe as the visitation in November, 1918.

The following are the weekly deaths from Influenza and Pneumonia during the epidemic:—

		January		February				March					April	
Week ending		18	25	1	3	15	22	1	8	15	22	29	5	12
EAST	Influenza	...	...	2	2	15	19	15	11	5	8	7	1	...
	Pneumonia	3	1	2	7	11	12	14	7	5	4	2	1	...
WEST	Influenza	1	2	...	1	5	18	24	13	8	6	2	5	...
	Pneumonia	1	1	1	3	11	8	8	5	5	2	1	1	2
Totals		5	4	5	13	42	57	61	39	23	20	12	8	2
November, &c. 1918		}		10	44	71	72	78	88	51	21	16	2	
Epidemic		}												

The lowest row of figures are the same weekly deaths in the previous epidemic. There was really no hint of an epidemic until February 8th, after this the same sudden onslaught occurred as in last November.

There are some marked differences in the two epidemics: the 1918 epidemic was of far heavier fatality, the deaths in eleven weeks then from Influenza and Pneumonia were 455, against 284 this year.

The deaths due directly to Influenza in the former epidemic were more than double those in the latter (351 to 168), but deaths from Pneumonia were heavier this year. In 1918 there was a terrible fatality amongst young adults, that was absent this year, but the fatality amongst the aged was greater. It appears that the type of Influenza in the former epidemic was far more severe than in the latter; but in February and March this year we had very bad weather, which probably caused more respiratory complications.

All the former precautions were repeated, excepting School closure, the attendance was watched week by week, and in my opinion closure was never quite justified. A leaflet of advice was printed and circulated.

Borough Hospital.

There were 3 cases of Scarlet Fever in the Borough Hospital at the close of last year; the quarterly numbers dealt with during this year have been as follows:—

Quarters.	Remaining in from previous Quarter.	Admitted	Total Discharged	Died.	Average number of days in of the cases admitted	Average daily number of Patients in Hospital.
First ...	3	11 <i>a</i>	10	...	40.6	5.1
Second	4	16 <i>b</i>	9	1	41.8	4.0
Third ...	11	44 <i>c</i>	40	...	43.7	22.0
Fourth	15	69 <i>d</i>	59	1	36.1	21.8
Year ...	3	140	118	2	38.9	13.4

(*a*) 1 case from the Coseley District.

(*b*) 1 case from the Workhouse.

(*c*) 1 case from the Coseley District.
1 case from the Tettenhall District.
1 case from The Cottage Homes.
1 case from the Penn District.

(*d*) 1 case from the Tettenhall District.

Leaving 25 cases in at the close of the year.

The following are the summaries of the cases admitted each quarter:—

First Quarter.—11 cases were admitted, none were fatal. One case was very severe, and one severe. Complications:— Adenitis, four cases.

Second Quarter.—16 cases were admitted: 1 was fatal; four years old, very severe septic case, diarrhœa, double Otorrhœa, nine days in. One other case was very severe. Complications:—Otorrhœa, 1 case. Adenitis, 4 cases. Skin affection, 1 case. One case developed Measles, 39 days after admission: the source was not found. There was no extension.

Third Quarter.—44 cases were admitted, none were fatal. Four cases were very severe, and four severe. Complications:—Otorrhœa, 3 cases, Adenitis, 8 cases; one when admitted had a tubercular sinus. Suppuration, 4 cases; one was a mastoid abscess, and one when admitted had a large abscess of the scalp. Skin affection, 4 cases.

Fourth Quarter.—69 cases were admitted: one was fatal, 12 years old; a very severe septic case, with cellulitis of arm from a pustule on the hand; four days in. Five other cases were very severe, and ten were severe. Complications:—Otorrhœa, 9 cases. Rhinitis, 3 cases. Adenitis, 5 cases. Suppuration, 1 case, a mastoid. Skin Affections, 9 cases. Rheumatism, 2 cases.

The type of disease was generally mild. One case was attended by her own doctor.

The following Table gives the proportion of cases without definite signs of Scarlet Fever when seen after admission, and the results :

Quarters.	Admissions.	Indefinite when admitted.			
		Total.	Apparently not had Scarlet Fever.		
			Total.	Caught Scarlet Fever.	Died.
First ...	11	2	1	...	...
Second ...	16	3	1	...	...
Third ...	44	3	1	...	...
Fourth ...	69	4	1	...	...
Year ...	140	12	4	...	...

This is a very small percentage of error ; it was fortunate that all the four cases escaped infection.

RETURN CASES. There were only two instances in which cases occurred apparently connected with patients returning home from the Borough Hospital: A, was 41 days in hospital, 43 days ill, a clean case, but had some chronic enlargement of the tonsils; 5 days after the return home another case occurred. B and C were 40 days in hospital, 41 and 42 days ill; B had nasal herpes in hospital, but was clear when discharged, and remained so; six days after their return another case occurred; four other children remained in this house un-affected. These two are a small percentage on the 116 cases sent home, and they could scarcely be guarded against; a notice is sent out with each case dscharged that they should not mix intimately with other children for three weeks after returning home; but this can hardly be complied with in the average of our cases; it certainly was not in the above two.

Vital Statistics.

Tables Nos. 9 and 10 give the general comparison for the Borough and the Sub-Districts with former years. The rapid fall in the birthrate of the previous three years had ceased last year, and this is maintained in 1919, but there is no improvement, the rate 21·9 being the same low one as 1918. Table No. 10 shows a decided gain in the East during the last two years ; but this is not so in the West, the rate there, 18·3, being the lowest on record. The infant death rate, 100, is moderate ; but the East, 120, is high ; the West, 82, is moderate. The main factors have been Pneumonia and Bronchitis ; but there has also been a heavy death return from Congenital Debility.

As regards our Mortality Statistics these are vitiated for comparison (as in 1918) by the Influenza Epidemic ; this caused very abnormal returns during the first quarter. The general death rate, 15·8, though less than the 17·7 of 1918, considerably exceeds the years preceding that. The general comparison with the last few years is the same for the Sub-Districts as for the Borough, but the East figures are very much worse than the West ; the former death rate being continuously almost 50% more than the latter.

Table No. 8 gives some details for the Borough. The seven ordinary zymotics are low, there has been no epidemic. Phthisis deaths are slightly above the average. Deaths from Respiratory diseases are far above the average, they were only once exceeded, in 1918 ; both high returns are due to the Influenza Epidemics. Deaths of old persons are greatly above the average, and far exceed the 1918 return. This is partly due to the fact that the 1918 Influenza spared old persons, while in the present year old persons suffered heavily, and the fatal lung complications were specially severe amongst old persons and infants. The Infant deaths are heavy, but are considerably below the average, because the low returns from Measles, Whooping Cough, and Diarrhoea neutralize the heavy Respiratory Deaths, and also, we may hope, because Infant Welfare work is shewing results. The same remarks apply to the comparatively low child deaths,

The following Table gives a few comparisons with the 96 Great Towns (populations exceeding 50,000) :—

	Birth Rate	DEATH RATE.							Infant Death Rate
		All Causes	Enteric Fever	Small-Pox	Measles	Scarlet Fever	Whooping Cough	Diphtheria	
96 Towns ...	19.0	13.8	0.01	0.00	0.13	0.04	0.07	0.14	93
Wolverhampton	21.9	15.8	...	0.01	0.08	0.03	0.09	0.02	100

In addition to the figures given in Table No. 10, the following death rates in the Sub-districts are of interest.

	EAST	WEST
Over 65 years of age	... 4.93	4.89
Between 1 and 5 years of age	... 1.87	0.95
Diarrhoea	... 0.95	0.18
Influenza	... 2.44	1.52
Phthisis	... 1.49	0.88
Respiratory Diseases	... 5.22	3.83

This comparison between the two Sub-districts has always been valuable as showing the striking contrast between a poor and crowded district and a better one. And the contrast remains almost more marked than ever, for though there has been a great improvement in the East, there has been relatively more in the West, and it is far more difficult to maintain a high standard in the bad district than in the good one. As an illustration, there were 236 courts in the East in 1902, 80 have been cleared out, leaving 156; in the West, there were 148, 74 have been cleared out, leaving only 74; thus, though more work was actually done in the East, the comparison with the West is worse than it was. Besides a far greater amount of new and better class building has been done in the West, which has in consequence a rapidly growing population; this further tends to increase the contrast between the Sub-districts.

**General Sanitary condition of the Borough with a
Historical Sketch of its Health Work.**

The Borough of Wolverhampton is situated on the North Eastern end of a ridge of Sandstone running from North to South. The highest point, Goldthorn Hill, at the South, is just 592 feet above sea level; the lowest near the North West extremity is 362 feet; St. Peter's Church is 530 feet above sea level. The Eastern and Southern portions of the Borough are mainly on sandstone, the lower parts to the North-west are on clay. The Borough is divided into East and West Registration Sub-Districts, roughly divided by the crest of the ridge on which the town stands, from the centre of the town to the north the Registration division line inclines away from the crest towards the West, from the centre to the south the division line inclines to the East of the crest. Originally the East was the larger Sub-District. In 1873 the population of the East was 38,010, of the West 31,841. The population of the Borough owing to the extraordinary prosperity of the Iron and Coal trade, had doubled itself in the preceding thirty years. To accommodate this increase buildings were run up without the least regard to any consideration except the bare housing; the ground between the streets was filled with courts and alleys; where badly constructed houses were in the vicinity of wet ashpits and privy middens. Nearly all the East Sub-District was of the above character, possibly about one-half of the West. This is reflected in the death rates, which in 1873 were: East 29·7, West 19·8; the mean rates for the next ten years were: East 27·8, West 17·8. These figures are not correct, because the East return includes deaths in public institutions, some not belonging to the Borough, and some actually belonging to the West. From 1884 I had the corrected figures, and they are given in Table No. 10. I find the mean correction due to the Institutions is 4·7 off the gross East rate, and 1·5 on the West. This would give the rates for 1883 as East 25·0, West 21·3: and for the next ten years, East 23·1, West 19·3. Since 1873 the growth of the Borough was almost wholly in the West Sub-District: the populations in 1901 were East 40,216, West 53,995, the increases since 1873 being East 2,206, West 22,154.

About 1881 an Improvement Scheme caused the demolition of a large area of bad slum property in the East; this loss of housing was compensated for by buildings in more open areas and under proper conditions.

Early in 1903 the boundary line between the Sub-Districts was altered, a small densely populated area in the North being transferred to the East, a large open and developing district in the South being transferred to the West; as a net result 418 persons were transferred from the West to the East, but owing to the loss by the East of the above developing district the population of that sub-district became a diminishing one, and at the 1911 census the sub-districts were East, 38,270, the West 57,058. The present estimate (only a very approximate one) is East 36,378: West 60,179.

The situation of the Borough makes the East Sub-District more open to severe East winds, which are usually prevalent in the early spring

The first permanent Medical Officer of Health was appointed in 1871; he had two Inspectors and a clerk. The most urgent evils at that time were the privy middens and cesspits which abounded everywhere; neither our water supply nor our sewerage was sufficient for any general adoption of water carriage; after many enquiries, in 1874 the pail system, with weekly removals, was adopted; by 1880 nearly 6,000 of these closets had been put in, a corresponding amount of middens and cesspits being done away with (by 1899 over 12,000 pail closets were in the Borough). Of course this system was a great improvement, though it is difficult to realise this now.

On my appointment as Medical Officer of Health in 1883, the Staff consisted of a chief Inspector, a sub-Inspector for each sub-district, an extra Inspector who did disinfections and made special reports, and a clerk. The following are a few extracts from my first Annual Report for the year 1884:

"The East Sub-District consists almost solely of a working population, marrying young, having a large proportion of children, and suffering exceptional hardships from the prevalent trade depression; the West though containing in parts a somewhat similar class, consists mostly of well-to-do artizans, tradesmen, professional and business men, with their families; it contains a large proportion of domestic servants. This is a population on the whole, wealthier, less exposed to hardship, and with a smaller proportion of children than the East. * * * in the East, a large number of works with the proximity of the pits, tends to keep a constantly murky atmosphere. The streets are narrow and the spaces between are occupied with houses round courts, and yards. * The dwellings themselves are nearly all of a poor description, crowded, ill-ventilated, many kept in a very dirty state, many on the verge of being unfit for habitation * * * in the West, though in two localities it rivals the worst districts in the East, yet, * * there are a number of well built houses, opening out into a pleasant country.

The methods of night-soil disposal * * the better class houses generally contain water closets, the prevalent system in the rest of the town, and which is being daily more adopted, is the pail system, with weekly removals * * in many parts of the town there still exist open middens, and still worse, closed cesspits, the latter * * seldom so small as to need emptying within six months, some receive the contents of several closets, and contain them for years. * * * The greater number of these cesspits are in the West Sub-District * * * another grave defect, the keeping of pigs, fowls and other domestic animals. * * *

Of course, an enormous amount of work had already been done in clearing away the most obvious nuisances. And yet, the above account is a very bad one; it ought to have been further mentioned that there were in the Borough, over two hundred wells, more or less contaminated, being used for domestic purposes. The Inspector's Office at this time was a room taken out of the Police

quarters; the next room was then taken in as an office for the Medical Officer. The work was pressed forward with the same staff for some years, but was frequently breaking down through outbreaks of Infectious Disease interfering with it. In 1891, the adoption of the separation system, by which the storm water was diverted from the sewers, gave more hope of an increase in water carriage; in 1892, waste water closets began to be adopted in many cases instead of pails. Generally increased work caused our failures to be more frequent and serious, and, after trying without success some modified plans, in 1895 a scheme was drawn up dividing each registration Sub-District into two Inspection Districts, and appointing four District Inspectors to work these; the Chief Inspector having general supervision. The details of the scheme were as follows; each Inspection District was divided into ten blocks, each block received special attention on a fixed day once a fortnight, Saturday mornings being free for other work. This ensured a round of general inspection fortnightly; and we knew within limits where any Inspector was at a certain time. The routine was that all cases of Infectious Disease notified within each Inspector's District, and any special complaints, were handed to him each morning, these were first attended to, and then he went on the block for the day. The plan of giving the whole of the work in a district to one inspector did away with multiple inspections, and made the appointments of more interest and value to each official. This scheme was begun in 1896. The work was hindered by the very partial efficiency of some of the District Inspectors, by the cramped office, and by the prolonged and ultimately fatal illness of the Chief Inspector. In 1898, Mr. Peers was appointed Chief Inspector, eventually the weaker members of the District staff were replaced, and we moved into proper offices.

In 1899, galvanised iron bins with weekly removals were recommended, instead of ash-pits.

The following gives the rate at which some of our graver defects were practically done away with, in 1897 and 1898, 15 and 16 wells were closed.

	1899	1900	1901	1902	1903	1904	1905	1906	1907
Cesspits abolished	28	10	15	42	24	2	15	1	2
Middens abolished	40	119	128	49	12	2	7	4	—
Privies abolished	93	157	136	128	66	22	47	63	23
Ash-bins provided	134	222	412	520	1311	1215	887	516	639
Wells closed	48	34	13	11	2	6	16	—	5

1908	1909	1910	1911	1912	1913	1914	1915
1	5	1	6	3	—	—	—
4	—	—	—	—	—	—	—
49	12	17	33	43	45	—	—
616	319	313	539	438	717	2115	1496
2	—	2	1	12	4	21	24

The increase in ash-bins in the last two years is due to the pail conversion scheme, an ash-bin being adopted in every conversion. Of the 155 Cess-pits abolished 44 were in the East, 111 in the West.

In October, 1899, two special Inspectors were appointed to make a complete survey of all the Courts in the Borough, their reports give particulars of every room in every house, and the surroundings, and have with them drawings to scale of every court. These valuable records were completed towards the end of 1901. The Factories and Workshops Act, 1901, necessitated the appointment of a Workshops Inspector, this was done at the close of 1902, by which time the District Inspectors had completed a Register of Workshops. During the next few years it became more and more evident that our staff was insufficient to cope with the increasing work, due to better ideals, and the endeavour to maintain a higher standard. In 1909 the first Tuberculosis order threw extra work on the District Inspectors ; the Housing and Town Planning Act of the same year made fresh demands upon us. The lack of housing accommodation of a certain type caused an increased amount of overcrowding in the form of lodgers. To meet these difficulties a Special Inspector for Housing Work, Houses let in Lodgings, and Tuberculosis enquiries was appointed at the close of 1911.

For many years it had been recognised that our Pail closets were out of date, and that their abolition was urgently needed; we had power to deal with them under our Provisional Order, 1896. The work was at last commenced in 1914, and during that year over 2,300 pails were converted to Water closets. This threw an enormous amount of work on our staff. Our Special Inspector for Housing, etc., resigned that year. It was decided to carry out, as far as possible the principle of letting all the inspections in a given area be done by one official. The Borough was divided into six inspection areas, each worked by one Inspector, who was appointed Housing, and Houses let in Lodgings Inspector. During the year 1915 the total of new Water Closets exceeded 4,000, and as in a considerable number of cases one water closet was accepted, instead of two pails, the reduction in the latter was very great. Then our staff, both Inspectors and clerks were so depleted, through volunteering for service, that all work came to a stop except the most urgent, we were often scarcely able to do the necessary reporting in connection with cases of Disease. As far the greater part of our work is devoted to preventing deterioration, especially since we attained a fair standard, it may be imagined what was the result of this enforced neglect of our routine work; we did what we could with temporary help, but were not in full working swing, until towards the end of 1919; as our staff returned one by one, the resumption of work was slow and confused. Perhaps the most serious deterioration was in the direction of Housing and Houses let in Lodgings, with the result of grave general overcrowding. These troubles had been threatening before the war. The following is a sketch of the house closing work since 1897, the records before that are difficult; from that year to 1906 inclusive, the houses closed annually were 50, 90, 13, 28, 74, 70, 34, 10, 6, 4, a total of 379, these were closed under our Improvement Act. Then for three years no closures were effected, partly because the worst cases were mostly gone, partly because of pressure of other work. From 1910, under the Housing Acts, we closed 21, 20, 41, 38, 34, 6, 8, 3: but during the last five years 1913-1917, we were seriously hindered by the lack of housing accommodation for the displaced tenants; this became so acute that

though many more houses were condemned and representations made, we could not close them. Altogether 171 houses were closed under the Housing Acts, (practically all these were demolished), making a total of 550 houses closed. Since the appointment of Housing Inspectors in December, 1911, 383 detailed records of houses have been made under the Housing Acts. Since 1917 we have ceased making Inspections as further steps were impossible. The same applies to the Houses let in Lodgings. We have numerous cases that we cannot deal with through lack of houses. Building operations had actually fallen below our needs for some years before the war, and during its progress they ceased altogether, and are now only being resumed under conditions of exceptional difficulty. Although the Housing is our greatest difficulty, it is illustrative of what we must expect in other directions. We are struggling to get back the standard which we had gradually attained to before the war, and we are not only faced with the enormous accumulation of arrears due to our own neglected work, but we are seriously hindered in getting our requisitions complied with through lack of labour and materials. I see little prospect of our regaining our lost position for some years.

Water Supply.

The Water supply of the Borough is from wells and bore-holes at Cosford, which produce about two and three quarter million gallons daily ; this is supplemented by about one fourth its amount from the river Worfe, after filtration. There are further bore-holes at Tettenhall yielding over a milion gallons. With the exception of the river this is an excellent water, rather hard ; the sources of the river are carefully watched ; and monthly bacteriological examinations of the water show a high degree of purity ; but it will be better when the plans for extending the sources of deep supply are carried out ; they are hindered by the present conditions as to labour and materials.

Welfare Work.

Our Welfare Work began with the appointment of Miss M. Carter, as Inspector of Midwives towards the close of 1907 ; there were then 39 Midwives on our register. Miss Carter speedily got on friendly terms with them all, and by a series of courses of lectures,

raised their practice to a very high level. We issued leaflets of advice 1st to "Expectant Mother," 2nd on "Infant Rearing," and 3rd on the "Hand-rearing of Infants." The Notification of Births Act was adopted early in 1908, with a view to extending this work; but it was felt that more personal influence with the mothers was needed; and it was impossible for Miss Carter to give much without neglecting her work with the midwives; the need for at least two Health Visitors was pointed out, and one was appointed at the close of 1911. In 1915, a second Health Visitor was appointed, and two Infant Clinics in charge of a Lady Doctor were opened. Unfortunately, this work was hampered by the second Visitor being called up for Army work in August. The value of the work became so evident that in 1917 we made great advances; in March a third Infant Clinic was opened, in July the Health Visitors were increased to three; in December a fourth was appointed. In 1918, a large house was taken on lease, one of the Infant Clinics was transferred to here; another room was fitted up as an Ante-Natal Clinic; and resident accommodation was provided for two Health Visitors who had difficulty in getting rooms.

The work done during 1919 will be seen from Dr. McLaren's summary of the Infant Clinics, and Miss Carter's Report, both appended to this Report.

The Inspector under the Sale of Food and Drugs Acts, informs me that during the year 1919, no samples of Cream were submitted to the Analyst, because there was practically no cream exposed for sale within this Borough.

INFANT CLINICS.—Report for 1919.

		West	East	North
No. on Books	...	840	754	623
New Cases	...	254	223	234
Attendances	...	2,070	1,293	1,565
Maximum attendances	...	60	50	65
Minimum	„ ...	16	4	10
No. of Clinics	...	48	50	47
Average Attendance	...	43.13	25.86	33.3

Report of the Inspector of Midwives.

(Year ending December, 1919.)

No. of Midwives on Register	...	...	...	40
No. of Visits to Midwives	...	...	...	648
No. of Miscellaneous visits (Mothers, babies, etc.)	...	...	...	181
No. of Ante natal visits	...	...	...	55

Notifications received from Midwives :—

(a) Sending for Medical help	...	...	...	193
(b) Still births	...	...	...	32
(c) Ophthalmia Neonatorum	...	...	...	23
(d) Miscellaneous	...	...	...	15

One case of Puerperal Fever this year proved fatal ; four other cases were reported, but the patients all recovered.

Of the 23 cases of Ophthalmia Neonatorum attended by the Health Visitor. 1 lost the sight of one eye, the other cases all recovered.

Visits paid by Health Visitors ;—

		Primary Visits.	Re-visits.	Clinic Visits.	Ophth. Neon.	Totals.
S. E.	...	548	661	85	46 visits (7 cases)	1340
S.W.	...	546	956	209	71 „ (7 cases) (333 in odd districts).	2115
N. E.	...	396	792	116	50 „ (6 cases) (289 in odd districts).	1643
N.W.	...	357	798	190	32 „ (3 cases) (186 in odd districts).	1563

MAUD CARTER, M.I.H.,

Cert. Medical and Surgical Nurse,
C.M.B. Certificate.

INDEX TO TABLES.

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- No. 1.—Cases of Small Pox, Scarlet Fever, Diphtheria, and Enteric Fever recorded during the year.
- „ 3.—Weekly Returns under the Infectious Diseases Notification Act, &c.
- „ 4.—Weekly Meteorological Returns.
- „ 5.—Weekly Returns of certain Deaths in the Sub-Districts.
- „ 6.—Quarterly Births and Deaths in the Sub-Districts and Borough.
- „ 7.—Deaths in the Sub-Districts during the year, classified according to Ages and Diseases.
- „ 7b.—Causes of, and ages at death during the year. (Table III, L.G.B.)
- „ 8.—Eleven years' Annual Returns of Deaths from various diseases in the Borough.
- „ 9.—Statistics for the Borough for 39 years (includes Table I, L.G.B.)
- „ 10.—Statistics for the Sub-Districts for 36 years.

Tables 2 and 7a are omitted.

Table No. 3.

WEEKLY RETURNS under the Infectious Diseases
Notification Act, &c.

1919 Week ending	Measles.	Scarlet Fever	Diphtheria	Enteric Fever	Puerperal Fever	Phthisis	Ophthalmia	Cerebro Spinal Meningitis	Acute Polio- myelitis	Primary Pneumonia	Influenzal Pneumonia
January 4th	3	1	..	..	.	3	..	..	..	..	..
„ 11th	9	..	..	..	..	3	2	..	..	..	..
„ 18th	8	2	..	..	..	3	..	..	..	..	..
„ 25th	2	..	..	..	..	3	..	..	..	..	..
February 1st	11	..	..	..	..	4	..	..	..	..	..
„ 8th	17	5	..	..	.	3	..	..	..	..	..
„ 15th	10	2	..	..	..	5	1	..	..	..	..
„ 22nd	10	3	1	..	..	6	1	..	..	..	..
March 1st	8	..	1	..	..	5	1	..	..	..	..
„ 8th	4	1	..	..	..	16	1	1	..	2	4
„ 15th	9	2	..	..	..	1	..	..	..	2	6
„ 22nd	8	1	1	..	..	6	..	..	..	2	12
„ 29th	16	..	1	..	..	6	..	..	..	1	7
April 5th	6	2	2	..	..	8	..	..	..	..	1
„ 12th	11	2	1	..	..	6	..	..	..	..	..
„ 19th	14	..	..	..	..	4	..	1	..	4	1
„ 26th	12	1	2	..	..	3	1	..	..	1	1
May 3rd	19	..	..	..	..	7	1	..	..	..	..
„ 10th	25	..	1	..	..	5	1	..	..	2	..
„ 17th	13	..	1	..	..	9	1	1	..	1	1
„ 24th	24	..	3	..	..	6	..	..	..	1	..
„ 31st	17	1	2	..	..	2	2	2	..	1	..
June 7th	29	..	1	..	..	9	..	..	..	..	..
„ 14th	12	..	3	..	..	5	..	..	..	1	1
„ 21st	23	4	4	..	..	3	1	..	..	7	..
„ 28th	10	5	2	..	..	10	2	..	..	..	..
July 5th	13	5	3	..	..	7	1	..	..	..	..
„ 12th	11	5	..	..	..	11	1	..	..	1	..
„ 19th	8	3	4	..	..	2	..	1	..	1	..
„ 26th	1	6	..	..	..	6	..	..	..	..	..
August 2nd	10	2	1	..	..	8	1	..	..	1	..
„ 9th	2	2	1	..	..	3	..	..	..	1	..
„ 16th	7	5	..	..	..	6	..	..	..	..	..
„ 23rd	3	4	2	..	..	4	1	1	..	..	..
„ 30th	4	..	2	..	..	6	..	..	..	..	..
Septem. 6th	1	7	..	..	..	15	..	..	1	1	..
„ 13th	5	1	..	..	..	5	1	..	..	..	..
„ 20th	3	4	1	..	..	7	1	..	..	..	1
„ 27th	9	..	2	..	..	10	..	..	..	1	..
October 4th	4	5	1	..	..	3	..	..	..	..	..
„ 11th	10	2	..	..	..	8	..	..	..	1	..
„ 18th	10	5	1	..	..	13	..	..	..	1	..
„ 25th	16	10	2	..	..	7	..	..	..	2	..
Novem. 1st	6	9	1	..	..	9	..	..	..	2	..
„ 8th	9	2	1	..	2	7	..	..	..	1	..
„ 15th	7	4	3	..	..	..	..	..	..	..	..
„ 22nd	5	2	1	..	1	8	..	..	..	1	..
„ 29th	9	9	1	..	1	7	..	..	..	1	..
Decem. 6th	5	7	3	..	..	5	1	..	..	..	..
„ 13th	3	7	..	..	1	5	..	..	..	1	..
„ 20th	3	5	..	..	1	7	..	..	..	3	..
„ 27th	3	6	..	..	..	5	1	..	..	2	..
Jan.3rd/1920	4	2	..	..	..	5	..	..	..	2	..
YEAR	504	151	56	..	6	327	23	7	1	47	35

This Table, 3, does not tally with Tables 1 & 2, these including a few cases not reported by doctors, and Table 3 including some cases which ultimately proved incorrect.

TABLE No. 4.

Weekly Meteorological Report, from Observations taken at 9 a.m. daily.

Week ending	BAROMETER REDUCED TO 32o AND SEA LEVEL.		Humidity.	TEMPERATURE.					Rain.	WIND.
	Mean	Range		Max.	Min.	Mean.	Earth.			Prevailing Directions.
							1 ft.	4 ft.		
1919	in.	in.	0-100	o	o	o	o	o	in.	
January 4th	29.492	.977	90	52.2	32.0	39.3	42.0	45.7	1.48	SW, NW
„ 11th	29.104	.912	94	45.2	29.5	37.9	39.7	44.4	.55	SE, SW
„ 18th	29.857	.469	94	51.0	29.0	40.2	39.3	44.3	.80	S, SW
„ 25th	30.249	.816	94	44.3	27.2	35.0	39.9	44.1	.45	SE, W
February 1st	30.017	.583	*	40.8	23.0	31.2	38.0	43.5	.40	S, N
„ 8th	30.074	1.055	*	39.6	21.0	31.6	36.6	42.3	.42	NE
„ 15th	30.169	1.188	*	42.8	17.5	29.8	36.3	42.1	.10	NE
„ 22nd	29.265	.518	98	49.2	29.0	37.3	34.8	41.3	1.88	E, SE
March 1st	29.681	.573	94	49.2	27.6	37.2	34.9	40.7	—	NW
„ 8th	29.847	.348	94	56.0	29.0	38.4	38.0	41.1	.82	NW
„ 15th	29.840	.733	95	53.2	28.5	40.3	40.4	41.6	1.64	SW, W
„ 22nd	29.965	1.176	97	47.2	28.0	34.9	40.4	42.0	1.73	W, N
„ 29th	29.690	.597	80	46.2	25.1	34.4	38.6	42.0	.26	NE, W
April 5th	29.860	.588	80	54.2	26.2	38.0	39.3	41.6	.02	W
„ 12th	29.862	.402	82	59.2	35.3	47.1	43.0	42.1	.15	SW
„ 19th	29.773	1.409	86	66.5	34.0	47.3	44.6	43.2	.80	SW
„ 26th	30.196	.802	86	62.5	29.5	45.2	47.1	45.6	.12	E, SW
May 3rd	29.834	.312	86	58.5	28.1	41.9	45.9	45.1	.60	W
„ 10th	29.994	.336	80	67.4	38.2	50.5	49.2	45.7	.44	NE
„ 17th	30.003	.365	70	76.2	43.2	58.9	52.9	47.1	.02	E
„ 24th	30.196	.319	60	79.2	42.1	56.8	55.6	49.4	—	E
„ 31st	30.222	.283	59	77.5	45.1	58.9	57.8	50.8	.10	E
June 7th	30.113	.171	79	81.1	41.0	58.7	59.1	52.4	.15	NE
„ 14th	30.226	1.157	70	81.9	48.3	60.8	60.8	54.8	.45	NW, SW
„ 21st	30.100	.195	70	76.3	51.8	61.5	60.0	55.0	.30	E
„ 28th	30.116	.380	72	64.3	40.2	51.5	57.4	54.6	.32	NW
July 5th	29.839	.393	87	61.0	44.7	50.2	55.3	54.0	.95	NW
„ 12th	30.099	.256	76	72.6	46.8	59.1	57.8	53.7	.23	NE, N
„ 19th	30.011	.402	74	72.7	46.5	60.8	58.8	54.8	1.39	NW, SW
„ 26th	30.056	.367	84	72.6	49.0	58.7	56.2	54.8	.44	NW, SW
August 2nd	30.156	.184	77	75.4	44.4	58.2	59.2	54.9	—	NE, NW
„ 9th	30.073	.239	81	83.4	49.3	58.7	60.8	55.7	.14	NW
„ 16th	30.141	.222	62	83.7	53.2	65.9	64.6	57.0	—	NW, SW
„ 23rd	29.979	.436	78	76.5	49.2	59.9	63.6	57.9	1.05	W, NE, NW
„ 30th	29.648	.825	83	66.8	40.8	53.2	58.8	57.5	1.64	SW, SE, NE
Septem. 6th	29.813	.337	85	70.1	45.5	56.8	57.0	56.3	.42	SW
„ 13th	30.166	.247	85	83.5	43.5	58.9	59.3	56.2	.01	W, SW, SE
„ 20th	30.094	.775	82	69.3	33.2	51.3	56.7	56.1	.31	NE, SE, W
„ 27th	29.681	.323	80	67.8	39.4	50.4	53.9	55.0	.88	W
October 4th	30.038	.840	82	65.8	32.0	47.2	51.2	53.9	.22	SW, NW
„ 11th	30.323	.520	87	63.2	31.3	45.2	50.9	52.9	.04	E
„ 18th	30.008	.976	86	57.2	30.6	41.5	47.3	51.7	.46	NW
„ 25th	30.252	.645	90	63.2	37.6	48.3	47.8	50.6	1.63	SW, SE
Novem. 1st	30.111	.538	85	47.5	30.7	38.2	45.0	49.8	.48	NE
„ 8th	29.766	.804	95	42.8	30.2	36.5	43.1	48.3	.26	NE
„ 15th	29.801	.271	86	39.5	21.7	31.2	40.6	47.1	.05	ENE
„ 22nd	29.861	.791	87	53.9	22.6	40.4	40.3	45.6	.74	NW, SW
„ 29th	29.535	.443	93	55.6	30.0	38.6	41.9	45.5	.26	SW
Decem. 6th	29.836	.642	88	53.4	25.9	41.9	40.6	44.7	.68	SW
„ 13th	29.886	.571	89	47.1	28.3	39.0	39.8	44.5	.21	N, SW
„ 20th	30.034	.629	93	51.8	37.0	42.6	41.2	44.3	.40	SW
„ 27th	29.623	.475	89	51.2	31.8	41.9	41.4	44.3	1.38	W
Jan. 3rd/1920	29.469	.747	89	50.9	27.4	39.1	40.8	44.2	.62	SW

Total rainfall 28.89 inches.

* Wet bulb frozen.

Table No. 5.—Weekly Returns of Deaths in the Sub-Districts.

[illegible]

Table No. 6.—Quarterly Births and Deaths during 1919.

		East Sub-District, 36,378					West Sub-District, 60,179					Borough, 96,280				
Quarters		1st	2nd	3rd	4th	Year	1st	2nd	3rd	4th	Year	1st	2nd	3rd	4th	Year
BIRTHS	Males ...	100	102	123	171	496	138	132	141	174	585	238	234	264	345	1081
	Females ...	135	113	115	158	521	106	109	134	186	535	241	222	249	344	1056
	Total ...	235	215	238	329	1017	244	241	275	360	1120	479	456	513	689	2137
	Rate ...	25.9	23.7	26.3	33.7	27.5	16.3	16.1	18.3	22.3	18.3	20.0	19.0	21.4	26.7	21.9
DEATHS	Males ...	179	54	62	75	370	189	89	60	100	438	368	143	122	175	808
	Females...	161	66	52	63	342	156	77	72	86	391	317	143	124	149	733
	Total ...	340	120	114	138	712	345	166	132	186	829	685	286	246	324	1541
	Rate ...	37.5	13.2	12.6	14.1	19.2	23.0	11.1	8.8	11.5	13.6	28.6	11.9	10.3	12.5	15.8
	65 years & upwards	72	32	34	44	182	116	56	56	71	299	188	88	90	115	481
	Under 1 year	54	14	26	28	122	37	23	18	14	92	91	37	44	42	214
	1—5 years	47	8	7	7	69	36	11	2	9	58	83	19	9	16	127
	Zymotics (7)	8	8	14	19	49	4	2	8	6	20	12	10	22	25	69
	Rate ...	0.9	0.9	1.5	1.9	1.3	0.3	0.1	0.5	0.4	0.3	0.5	0.4	0.9	1.0	0.7
	Small Pox	...	...	...	...	...	...	...	1	...	1	...	...	1	...	1
	Measles...	...	1	1	1	3	1	1	1	1	4	1	2	2	2	7
	Scarlet Fever	1	1	...	...	2	...	...	...	2	2	1	1	...	2	4
	Whooping Cough...	5	1	...	1	7	1	...	1	...	2	6	1	1	1	9
	Diphtheria	...	...	2	...	2	...	...	...	...	...	...	...	2	...	2
	Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Diarrhoea	2	5	11	17	35	2	1	5	3	11	4	6	16	20	46
	Influenza	87	2	1	...	90	81	8	2	2	93	168	10	3	2	183
	Phthisis	21	16	7	11	55	20	16	9	9	54	41	32	16	20	109
	Respiratory Diseases	123	25	24	21	193	112	52	19	51	234	235	77	43	72	427
	Uncertified	...	...	...	...	...	...	...	1	...	1	...	...	1	...	1
	Inquests	17	9	10	17	53	19	6	11	12	48	36	15	21	29	101
Deaths in		{ General Hospital					...					...
Public Institutions		{ Borough Infectious Hospital					...					...
Non-residents in the Borough (excluded from our Tables)		{ Other Institutions					...					...
Borough Residents dying outside (included in our Tables)		{					...					...
							83					70				
							59					59				
										
							11					11				
							56					56				
							96					96				
							38					38				
							52					52				
							36					36				
							74					74				
							2					2				
										
							1					1				
							7					7				
							38					38				
							199					199				
							224					224				

Table No. 7.

DEATHS in the Sub-Districts during 1919, classified according to Ages and Diseases.

No.	DISEASES	EAST SUB-DISTRICT.											WEST SUB-DISTRICT.										
		AGES.											AGES.										
		0—	1—	2—	5—	15—	25—	45—	65—	75—	All ages	0—	1—	2—	5—	15—	25—	45—	65—	75—	All ages		
	ALL CAUSES	122	34	35	38	29	98	174	109	73	712	92	26	32	39	33	124	184	133	166	829		
5a	Small Pox, vacc.	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1
6	Measles	...	1	...	1	1	...	...	...	...	3	1	...	2	1	...	...	...	...	...	4
7	Scarlet Fever	...	...	1	1	...	...	...	...	...	2	...	...	1	1	...	...	...	...	...	2
8	Whooping Cough	...	2	4	1	...	...	...	...	...	7	1	1	...	...	...	...	...	...	...	2
9	Diphtheria	...	...	1	...	1	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...
10	Influenza	...	3	5	6	9	6	25	24	9	3	90	6	7	3	7	8	28	13	15	6	93	
14	Dysentery ...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
18	Erysipelas	...	1	...	...	...	1	...	...	2	4	1	...	...	...	...	...	...	...	...	1
20	Pyæmia ...	...	...	...	...	...	...	1	...	...	1	1	...	...	1	...	1	1	...	...	4
28, 29	Pulmonary Tuberculosis	...	...	2	1	7	23	20	2	...	55	...	...	1	2	8	28	14	1	...	54
30	Tuberculosis Meningitis...	...	...	...	...	1	...	...	...	...	1	1	2	2	...	...	...	...	...	...	5
31	Abdominal Tuberculosis	...	1	1	...	...	...	...	...	...	2	...	1	...	2	...	...	...	...	...	3
32, 33	Tuberc. of Bones & Joints	...	...	...	...	2	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...
34, 35	Other Tuberculosis	...	...	...	1	1	1	1	...	...	4	...	...	...	2	...	1	...	...	...	3
37	Syphilis	...	2	...	...	...	1	...	...	...	3	1	...	...	...	...	...	...	...	...	1
38	Other Venereal Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1
39-45	Cancer	...	...	...	...	...	1	26	11	3	41	...	...	...	1	3	23	18	8	53	...
46	Other Tumours	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1
47	Rheumatic Fever	...	...	...	1	...	1	...	...	...	2	...	...	...	2	...	1	...	...	...	3
48	Chronic Rheu., Gout	...	...	...	...	...	...	1	...	2	3	...	...	...	...	...	...	1	...	...	1
49	Scurvy ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
50	Diabetes ...	...	...	...	1	...	...	2	1	...	4	...	...	...	1	...	1	3	1	1	7
51	Ex-oph Goitre	...	...	...	...	...	1	...	...	...	1	...	...	...	...	1	...	...	...	...	1
54	Anemia ...	...	...	...	...	...	...	...	2	...	2	...	...	...	...	...	1	1	1	3	...
55	Purpura Hæmorrh.	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1
56	Alcoholism	...	...	...	...	...	...	1	...	1	2	...	...	...	...	...	...	...	...	...	...
60	Encephalitis ...	...	...	...	...	...	1	...	...	...	1	...	...	1	...	1	...	...	...	...	2
61a	Cerebro-spinal Fever	...	...	1	1	...	...	...	...	...	2	...	...	...	...	...	1	...	...	...	1
61b-c	Meningitis	...	...	...	...	...	...	...	...	...	...	1	2	...	3	...	1	1	...	...	8
62, 63	Dis. of Spinal Cord	...	...	...	...	...	1	...	1	1	3	...	...	...	...	...	1	5	2	...	8
64	Apoplexy	...	...	...	...	...	1	17	9	3	30	...	...	...	...	...	...	15	14	17	46
65, 66	Other Paralysis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	2
67, 68	Insanity	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	2	...	...	5
69	Epilepsy	...	...	...	...	...	2	...	...	...	2	...	...	...	1	1	1	1	...	...	4
70 71	Convulsions	...	5	1	...	1	...	...	...	...	7	5	1	...	...	...	...	...	...	...	6
73, 74	Other Nervous Diseases	...	...	...	...	...	...	1	1	...	2	...	...	...	...	...	3	...	...	...	3
76	Ear Diseases	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	2
77	Pericarditis	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...
78	Acute Endocarditis	...	...	...	1	...	...	1	...	...	2	...	...	...	...	...	1	...	...	...	1
79	Other Heart Disease	...	...	...	2	1	4	11	14	8	40	...	...	...	1	1	6	24	12	11	55
81	Disease of Arteries	...	...	...	...	...	...	3	...	...	3	...	...	...	...	...	1	1	1	...	3
82	Embolism, Thrombosis	...	...	...	...	...	...	1	...	1	2	...	...	...	...	...	...	3	2	2	7
87	Laryngitis	...	2	...	...	...	...	...	...	...	2	...	...	...	...	...	...	1	...	...	1
89, 90	Bronchitis	...	19	1	5	2	2	3	29	16	15	92	13	6	5	2	4	28	30	41	129		
91, 92	Pneumonia	...	20	17	15	9	3	10	9	12	2	97	13	4	13	7	8	20	17	6	13	101	
93	Pleurisy	...	...	...	...	...	1	1	...	...	2	...	...	...	...	...	1	1	...	...	2
94, 98	Other Respiratory Dis.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1

TABLE No. 7 (continued).

No.	DISEASES.	EAST SUB-DISTRICT.										WEST SUB-DISTRICT.									
		AGES.										AGES.									
		0—	1—	2—	5—	15—	25—	45—	65—	75—	All ages	0—	1—	2—	5—	15—	25—	45—	65—	75—	All ages
99, 100	Dis. of Mouth & Pharynx	...	...	...	1	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	1
101	Strict Asophagus	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...
102	Gastric Ulcer	...	...	...	...	...	3	2	1	...	6	...	...	...	...	...	...	1	...	...	1
103	Gastritis, etc.	...	1	...	...	...	...	1	...	...	2	...	...	...	...	...	...	1	1	...	2
104-5A	Infective Enteritis	...	14	3	...	...	...	...	...	...	17	1	...	...	...	...	...	...	...	...	1
104-5B-C	Enteritis Diarrhoea	...	13	...	...	...	...	...	1	...	14	4	...	...	...	...	1	1	...	...	6
104-5D	Gastro Enteritis	...	4	...	...	...	...	...	...	...	4	3	...	...	...	...	...	...	1	...	4
104-5H	Duodenal Ulcer	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
108	Appendicitis	...	...	...	...	2	...	...	...	...	2	...	1	...	1	2	...	1	...	1	6
109A-B	Hernia, Obstruction	...	2	...	...	...	1	1	3	1	8	...	...	...	...	...	2	...	...	3	5
113A-B	Cirrhosis of Liver	...	...	...	...	...	1	2	...	...	3	...	...	...	...	...	2	1	...	...	3
114	Biliary Calculi	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
115	Other Dis. of Liver	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
117	Peritonitis	...	...	...	...	1	...	...	...	...	1	...	...	1	...	...	...	...	...	...	1
118	Other Digestive Dis.	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
119-20	Nephritis	...	...	...	1	2	5	4	8	5	25	...	...	1	1	...	1	7	4	1	15
123	Urinary Calculi	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
124-6	Dis. of Bl'der or Prostate	...	...	...	...	...	...	3	...	...	3	...	...	...	...	...	1	1	1	...	3
129	Uterine Tumour	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	2
131	Ovarian Cyst, etc.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
134	Accidents of Pregnancy	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
135	Puerperal Hæmorrhage	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	2
137	Puerperal Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1
138	Puerperal Renal	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1
142A	Senile Gangrene	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	1	2	...	3
142B-C-D	Other Gangrene	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1
143-4	Boil, Abscess	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	1	...	1
145	Skin Diseases	...	1	...	...	...	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...
146-9	Dis. of Bones and Joints.	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
150	Congenital Malformations	1	...	...	...	...	...	...	...	...	1	6	...	...	1	...	...	1	...	...	8
151A	Premature Birth	22	...	...	...	...	...	...	...	...	22	23	...	...	...	...	...	...	...	...	23
151B-E	Debility, Marasmus	5	...	...	...	...	...	...	...	...	5	8	...	...	...	...	...	...	...	...	8
151A-D	Atelectasis, Injury, etc.	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
153	Neglect	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
154	Old Age	...	...	...	...	...	...	1	15	22	38	...	...	...	...	...	...	13	49	...	62
155-63	Suicide	...	...	...	...	1	2	3	1	...	7	...	...	...	...	...	1	4	...	...	5
ACCIDENTS																					
167	Burns	...	...	2	3	...	1	1	...	...	7	...	...	1	1	1	...	...	1	1	5
169	Drowning	...	...	...	2	...	...	...	...	...	2	...	...	...	...	...	1	...	...	...	1
172	Fall	...	...	...	...	1	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...
173-4	Industrial	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
175	Vehicles and Railways	...	...	...	...	1	1	...	1	...	3	...	...	1	...	...	1	...	3	...	5
176-81	Other Accidents	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	3
182-4	Homicide	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
187-9	Not specified or ill-defined	3	...	...	...	1	6	1	...	...	11	...	...	...	...	...	2	5	1	1	9

Table No. 7b. (TABLE III, L.G.B.)

Deaths in the Borough during 1919 classified according to Ages and Diseases.

[illegible]

Table No. 8.—Eleven Years' Annual Deaths, &c.

	1909	1910	1911	1912	* 1913	1914	1915	1916	1917	1918	* 1919	A
Small Pox ...	...	...	...	1	...	...	...	...	...	...	1	0.1
Measles ...	156	18	66	11	79	11	130	51	16	14	7	55.2
Scarlet Fever ...	9	4	5	7	2	5	2	3	5	5	4	4.7
Whooping Cough ...	35	28	9	21	15	17	11	15	18	14	9	18.3
Diphtheria ...	11	4	5	12	7	18	15	17	7	5	2	10.1
Euteric Fever ...	3	1	2	1	4	3	1	...	...	...	...	1.5
Diarrhoea ...	27	15	99	30	118	91	49	62	32	28	46	55.1
Seven Zymotics ...	241	70	186	83	225	145	208	148	78	66	69	145.0
Rate per 1,000 ...	2.5	0.7	2.0	0.9	2.3	1.5	2.2	1.5	0.8	0.7	0.7	1.51
Phthisis ...	106	77	105	75	124	111	113	105	101	112	109	102.9
Respiratory Diseases	322	230	263	265	313	360	396	311	295	431	427	318.6
65 years and upwards	422	375	381	399	374	415	419	403	429	396	481	401.3
Under 1 year ...	343	253	331	211	334	295	317	238	165	202	214	268.9
1—5 years ...	268	123	186	108	200	125	233	156	115	180	127	169.4

* These years contain 53 weeks.

A—Annual Averages for the ten years preceding 1919.

Table No. 9. (INCLUDES TABLE I, L.G.B.)

Vital Statistics during 1919 and 38 previous years.

Year	Popula- tion estimated to middle of each year.	Births.		DEATHS BELONGING TO THE DISTRICT.				TOTAL DEATHS IN PUBLIC INSTITU- TIONS IN THE DISTRICT.	Deaths of Non- residents registered in the Disfrict.	Deaths of Residents occurring outside the District.	TOTAL DEATHS REGISTERED IN THE DISTRICT.	
				Under 1 year of age.		At all Ages.						
		No.	Rate.	No.	Rate per 1,000 Births	No.	Rate.				No.	Rate.
1	2	3 & 4	5	10	11	12	13		8	9	6	7
*1881	75,932	2769	35.9	410	148	1552	20.1	272	96	...	1648	21.3
Averages for years 1881-1890	78,992	2738	34.6	452	165	1638	20.7	306	113	...	1750	22.1
Averages for years 1891-1900	88,011	2977	33.9	582	195	1866	21.2	379	137	...	2002	22.8
Averages for years 1901-1910	94,728	2782	29.4	385	138	1485	15.7	†282	132	99	1518	16.0
1911	95,357	2415	25.4	331	137	1515	15.9	263	153	186	1482	15.6
1912	95,472	2430	25.9	211	87	1280	13.5	269	150	184	1246	13.1
*1913	95,587	2590	26.7	334	129	1545	15.9	308	185	189	1541	15.9
1914	95,702	2610	27.4	295	113	1495	15.7	284	163	217	1441	15.1
1915	95,817	2381	24.9	317	133	1623	17.0	270	150	222	1551	16.2
1916	95,933	2298	24.0	238	104	1391	14.5	289	179	207	1363	14.3
1917	96,048	2009	21.0	165	82	1272	13.3	294	184	199	1257	13.1
1918	96,164	2095	21.9	202	97	1692	17.7	344	215	233	1674	17.5
*1919	96,280	2137	21.9	214	100	1541	15.8	326	199	224	1516	15.5

* These years contain 53 weeks. Area of District in Acres, 3,525.

CENSUS, 1911, Total Population at all ages, 95,328.

Institutions within the Borough receiving sick and infirm persons from without the Borough—
The Wolverhampton and Staffordshire General Hospital;
The Wolverhampton Borough Hospital;
The Wolverhampton and Midland Counties Eye Infirmary;
The Wolverhampton and District Hospital for Women;
The Queen Victoria Nursing Institution.

Near the end of 1903 the Workhouse (receiving cases from a district nearly double the size of the Borough) was removed outside the Borough.

Table No. 10.

EAST SUB-DISTRICT.										WEST SUB-DISTRICT.									
YEAR	Population estimated to middle of each year <i>a</i>	BIRTHS.		DEATHS.				Population estimated to middle of each year <i>a</i>	BIRTHS.		DEATHS.								
		Number. <i>b</i>	Rate.	At all ages.		Under 1 year of age			Number. <i>b</i>	Rate.	At all ages		Under 1 year of age						
				Number. <i>c</i>	Rate	Number. <i>d</i>	Rate per 1,000 Births registered				Number. <i>c</i>	Rate.	Number. <i>d</i>	Rate per 1,000 Births registered.					
1884	38,748	1382	35.8	981	25.4	275	199	39,146	1309	33.5	753	19.3	231	176					
Averages for years 1884-1890	38,876	1418	36.4	916	23.5	263	186	41,098	1304	31.7	748	18.2	191	154					
Averages for years 1891-1900	39,621	1510	38.2	931	25.3	326	216	48,326	1467	30.4	864	17.9	256	174					
Averages for years 1901-1910	39,445	1255	31.8	721	18.3	202	160	55,250	1527	28.0	764	13.8	183	119					
1911	38,211	1091	28.4	681	17.9	160	148	57,150	1317	23.1	834	14.6	171	130					
1912	37,977	1095	28.9	627	16.6	109	100	57,520	1316	23.0	653	11.4	102	78					
*1913	37,744	1128	29.4	756	19.7	188	167	57,893	1449	24.6	789	13.4	146	101					
1914	37,513	1212	32.4	698	18.4	163	134	58,268	1373	23.6	797	13.7	132	96					
1915	37,283	1064	28.6	769	20.7	179	126	58,645	1298	22.2	854	14.6	138	106					
1916	37,055	1003	27.2	645	17.4	124	124	59,025	1295	22.0	746	12.7	114	88					
1917	36,828	920	25.1	586	16.0	92	100	59,407	1089	18.4	686	11.6	73	67					
1918	36,602	975	26.7	789	21.6	111	114	59,792	1105	18.5	903	15.2	91	82					
*1919	36,378	1017	27.5	712	19.2	122	120	60,179	1120	18.3	829	13.6	92	82					
CENSUS, 1911										CENSUS, 1911									
...										...									
38,270										57,058									

At the beginning of 1903 the dividing line between the Sub-Districts was altered; the alteration affects the 1901 census by transferring 418 from the West population to the East.

* These years contain 53 weeks.

Chief Sanitary Inspector's Summary

—OF—

The Main Routine Work of the Several Inspectors.

FOR THE YEAR 1919.

The Columns show (1) the previous 5 years' average figures ; (2) and (3) last and present year's figures, respectively.

PUBLIC COMPLAINTS OR REQUESTS RECEIVED		(1)	(2)	(3)
In respect of Sanitary defects	...	618	632	920
„ „ Closet pans or ashes	...	440	786	989
INFECTIOUS DISEASE ENQUIRIES MADE		1512	1588	1542
INSPECTIONS AND RE-INSPECTIONS RECORDED		44511	33718	46978
SANITARY DEFECTS REPORTED		5062	4111	7615
NOTICES ISSUED	{ "Intimations"	2091	2110	3510
	{ Statutory	1085	925	1734
SANITARY IMPROVEMENTS RECORDED		9666	4186	6755
TOTAL PREMISES IMPROVED		3570	2552	3615
DISINFECTION	{ Rooms, &c.	466	425	412
	{ Articles removed for	3696	3637	2690
DISEASED OR UNSOUND	{ Tons	43	6	6
	{ FOOD DESTROYED { Cwts	2	9	19½
CANAL BOATS	{ Examined for Registration	4	0	2
	{ Inspections	185	18	125
	{ Contraventions	47	2	36
	{ Notices issued	34	1	27
VETERINARY INSPECTION OF COWS		1081	1148	1146
PROSECUTIONS		12	24	21

